



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/060,049	01/28/2002	Kenneth L. Levy	P0569	6575
23735	7590	08/11/2006	EXAMINER	
DIGIMARC CORPORATION 9405 SW GEMINI DRIVE BEAVERTON, OR 97008			MANNING, JOHN	
			ART UNIT	PAPER NUMBER
			2623	
DATE MAILED: 08/11/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/060,049

Applicant(s)

LEVY ET AL.

Examiner

John Manning

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-28 and 57-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-28 and 57-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/19/04</u> , <u>7/10/06</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election of Species 2 in the reply filed on 7/06/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 20-28 and 57-59 rejected under 35 U.S.C. 103(a) as being unpatentable over Kunkel et al. (US Pat No 5,961,603).

In regard to claim 20, Kunkel discloses a system and method for accessing Internet-based and other information through a user television in a television distribution network enables a user to access and view information which is related to the programming content of a currently viewed television broadcast, where each television broadcast to be linked to the Internet-based or other information is transmitted by the original broadcaster with an identification tag which identifies the Universal Resource

Art Unit: 2623

Locator (URL) or address where the program content related information is located (Abstract).

The claimed limitation of “a cable head end to receive the content, the content including an embedded” identifier is met by Figure 1 Item 14. “The network headend 14 receives video programming to be distributed to the user from a satellite 26 as is conventional. In contrast to conventional television distribution systems, however, the headend 14 can also access information from one or more headend databases 28 (hereinafter referred to as the hyperlink database), and this information may be used to select the Internet or other information which can be downloaded to the set top converter boxes 20 for viewing on the user televisions 24. The information stored in the hyperlink database(s) 28 is reference information which is related in some manner to the programs and advertisements being broadcast through the distribution network 16 to the users. For example, the reference information preferably includes source, content, timing and duration information regarding each program or advertisement. In addition, a key piece of information will typically be a Uniform Resource Locator (URL) which is used to reference more detailed information associated with the content of the programs and advertisements being broadcast” (Col 4, Lines 40-58).

The claimed limitation of a “detector to extract the identifier from the received content” Figure 2, Items 14 and 52. “Alternatively, however, it will of course be understood that the headend 14 can detect and remove the ID tags itself” (Col 6, Lines 20-22).

The claimed limitation of “a bridge to communicate the extracted identifier to a database, the database including a trigger indexed according to the identifier, said bridge to receive a corresponding trigger identified in the database as corresponding to the identifier” Figure 2, Items 54 and 28. “Each of the uplink centers 38 also preferably communicates with an uplink center database 40 which stores information relating to the programming or advertising content such as the URL or other Web based information to be associated with the programming or advertising content. The URL data in each of the uplink center databases 40 is preferably communicated via the Internet to a master database 42 which is interfaced to the data collection center 34. The master database 42 contains the URL and other reference data for all channel hyperlinks for the various national broadcast and cable TV networks. This information is then retransmitted, again preferably through the Internet, to each of the network headends 14 where the URL data is stored in the one or more hyperlink databases 28.” Additionally, it should also be noted that although much of the URL data stored in the hyperlink database 28 will be the same as the corresponding data stored in the master database 42, there will be some differences in cases where the URLs or other Web data to be associated with an ID tag, as supplied by the programming source, are to be unique for a particular geographic or demographic location or market. For example, an ID tag for an advertised product may be linked to information pertaining to one supplier of the product in a first market area, and information pertaining to a second supplier in a second market area. The data collection center 34 thus manages the transmission of the URL data from the master database 42 to the hyperlink database 28 in accordance

Art Unit: 2623

with any geographic or demographic identifiers that may be present in each ID tag. Also, the headend database 28 will likely contain only the information on ID tags for programming and advertising which may likely appear on the broadcast channels received by the headend 14, while the master database 42 will contain all such information" (Col 5, Line 44 – Col 6, Line 9). The URL is the inserted trigger.

The claimed limitation of "an inserter communicating with said bridge to insert the trigger into the received content" is met by Figure 2, Items 14 and 50. "The heart of the headend 14 is a headend server 50 which manages accessing of channel hyperlink information from the ISP 30, hyperlink database(s) 28 and local database 44, storage of pre-cached channel hyperlink information in the cache 31, and reception of program content ID tag information from an ID tag receiving circuit 52. The headend server 50 includes a processor 54 for carrying out these operations" (Col 6, Lines 37-43).

Kunkel fails to explicitly that the embedded identifier is a watermark. Moskowitz teaches the use of digital watermark for content identification (See Col 8, Line 66 – Col 9, Line 28) so as "to allow for secured metering and support of other distribution systems of given media content and relevant information associated with them, including addresses, protocols, billing, pricing or distribution path parameters, among the many things that could constitute a 'watermark.'" (Col 1, Lines 15-20). Consequently, it would have been clearly obvious to one of ordinary skill in the art to modify Kunkel with the use of digital watermark for content identification for the stated advantage.

In regard to claim 21, Kunkel discloses “said inserter communicates with at least a set-top box” (See Col 6, Lines 37-43; Figure 1, Items 14 and 20; Figure 3).

In regard to claim 22, Kunkel discloses “said cable head end communicates the trigger to a network and receives from the network related content” (See Col 5, Lines 7-25).

In regard to claims 23-25, Kunkel discloses “the related content comprises interactive content”, “the related content comprises at least one content item from a group of content items comprising a web page, HTML code, Java applet, audio, visual, graphic, and text” and “said inserter inserts the related content into the received content” (See Col 4, Line 40 – Col 5, Line 6).

In regard to claim 26, the claimed limitation of “a cable head end to receive content”, where the content is “embedded with a unique identifier, said cable head end comprising an aggregator in communication with at least one set-top box and with a database, said aggregator communicating the unique identifier once extracted from the content to the database, and communicating related interactive data from the database to the set-top box” is met by Figure 1-3, as discussed for claim 20 (Col 4, Lines 40-58; Col 6, Lines 20-22; Col 5, Line 44 – Col 6, Line 9; Col 6, Lines 37-43). Kunkel fails to explicitly that the embedded identifier is embedded steganographically. Moskowitz teaches the use of digital watermark (i.e. steganographically embedded information) for content identification (See Col 8, Line 66 – Col 9, Line 28) so as “to allow for secured metering and support of other distribution systems of given media content and relevant information associated with them, including addresses, protocols,

Art Unit: 2623

billing, pricing or distribution path parameters, among the many things that could constitute a 'watermark.'" (Col 1, Lines 15-20). Consequently, it would have been clearly obvious to one of ordinary skill in the art to modify Kunkel with the use of steganographically embedded information for content identification for the stated advantage.

In regard to claim 27, Kunkel discloses "said aggregator communicates with a plurality of set-top boxes, and wherein said aggregator multicasts the related interactive data to the set-top boxes" (See Col 6, Lines 37-43; Figure 1, Items 14 and 20; Figure 3).

In regard to claim 28, see claim 26.

In regard to claims 57 and 59, see claims 20 and 26.

In regard to claim 58, see claims 21 and 27.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows:

- Rhoads (US Pat No 6,122,403) discloses various improvements to steganographic systems, and applications.
- Rodriguez (US Pat App Pub No 2002/0066111) discloses an enhanced television system (e.g., ATVEF-based) conveys enhancement data using an in-band, video watermark, channel.



Art Unit: 2623

- Usami et al. (US Pat No 6,785,814) discloses a system where supplementary information related to original data is embedded in the original data without being lost or altered and without degrading the quality of the original data.
- Kondo (US Pat No 6,690,831) discloses an encoding device and encoding method, decoding device and decoding method, information processing device and information processing method.
- Yamazaki (US Pat No 6,707,465) discloses a technique capable of always keeping digital watermark information embedded in image data having the embedded digital watermark information by an optimum scheme on the basis of a time factor, or removing a digital watermark, or erasing the image data

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 571-272-7352. The examiner can normally be reached on M-F: 9:00 - 5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM

August 2, 2006



**JOHN MILLER**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**